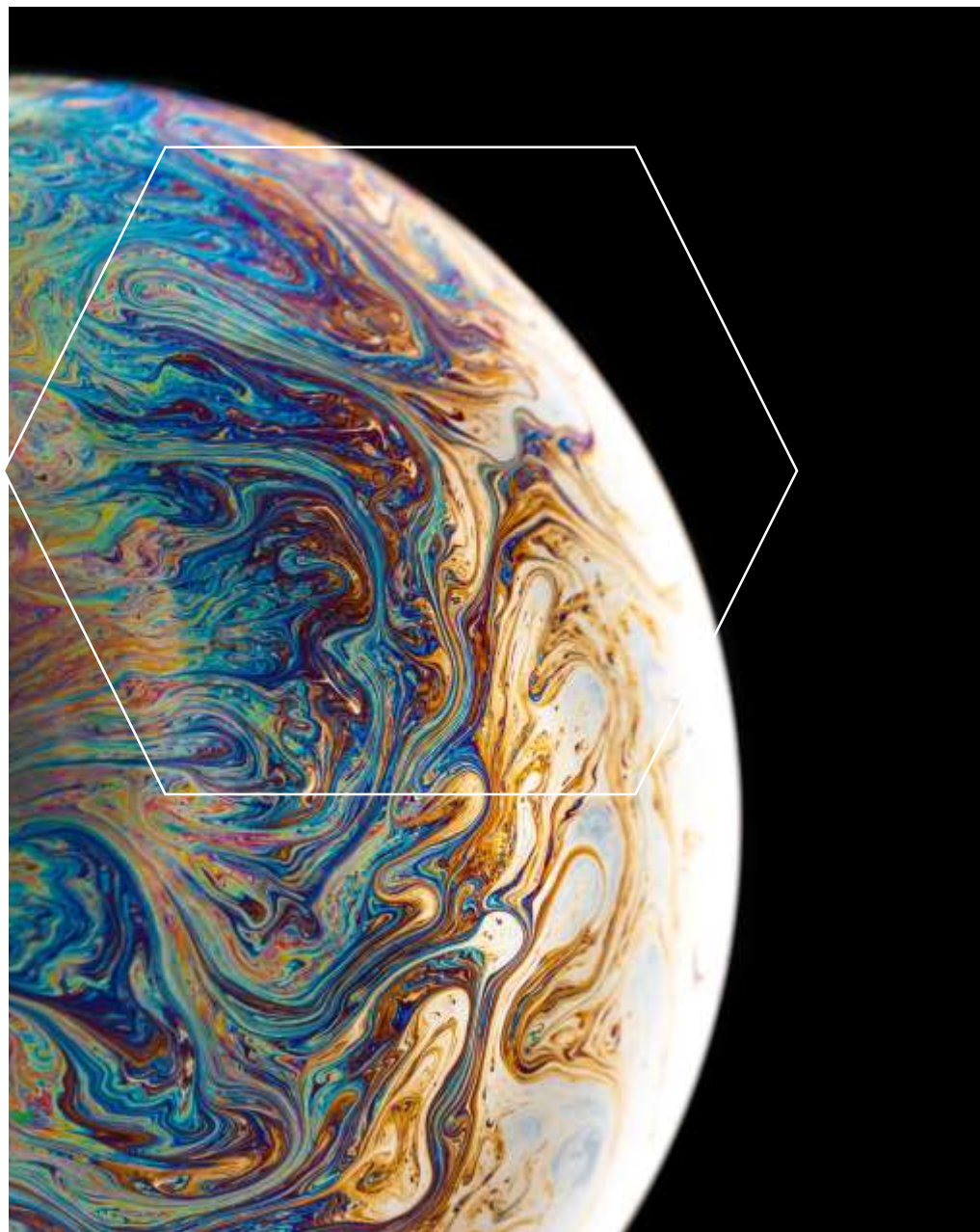


GEOGRAPHY

BULLETIN

**APRIL
EDITION,
2019**



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Special Announcement

EXPOSING THE WORLD WE LIVE IN



Niagra Falls, Canada



FROM THE HOD

A MESSAGE FROM DR. AUWAL F. ABDUSSALAM

I welcome everyone to the April's edition of our monthly bulletin. The month of April has been very eventful and tasking because of the need to meet up with the academics and administrative demands of the semester.

I want to use this medium to congratulate those staying on top of their duties and responsibilities and also urge those lagging both staff and students to brace up to the challenges.

Once again, thumbs up for the editorial board for doing a great job. I wish you all a successful month of May.

Thank you.

DID YOU KNOW?

MOUNT EVEREST IS 8.9KM
(5.5 MILES) HIGH

DID YOU KNOW?

TREE HUGGING IS FORBIDDEN
IN CHINA?

SPACE EXPLORATION: THE DISCOVERY OF BLACKHOLE

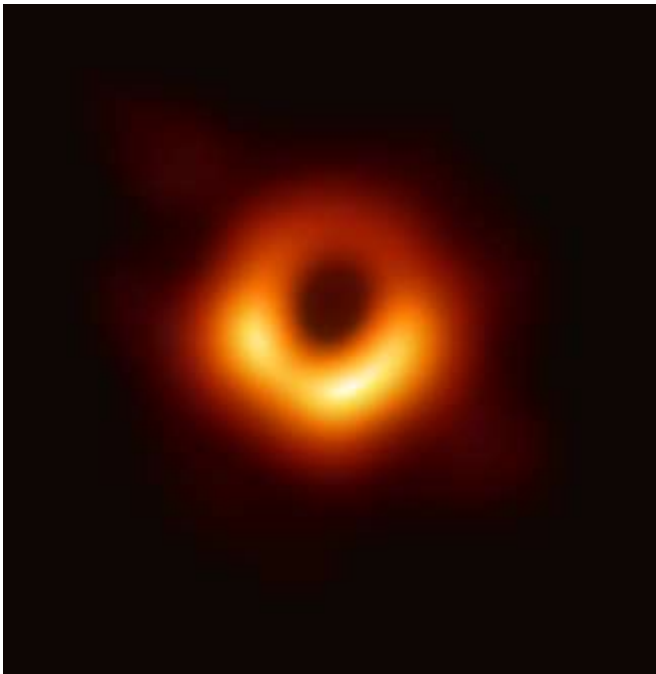
Goodheart A. Sheyin

Kaduna State University, Kaduna.

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April, 2019

The first ever blackhole photographed was taken on April 10 2019. This was announced by the Australian Academy of Science. The Image was released by the Event Horizon Telescope [EHT] which is actually a network of Eight 8 –Radio telescopes scattered across the globe. The findings were further processed by a super computer.



The Black Hole [Credit: Wikipedia]

Don't let the name fool you: a blackhole is anything but empty space. Rather, it is a great amount of matter and energy packed into a very small area. It is a region of space-time exhibiting such strong gravitational effects that particles such as light cannot escape from inside it. The boundary from which no escape is possible is called the 'Event Horizon'. Although the Event Horizon has an enormous effect on the fate and circumstances of an object crossing it, no locally detectable features appear to be observed. In many ways, a blackhole acts like an ideal black body, as it reflects no light. The blackhole and the solar

system are described as the most powerful objects known in the universe. Gravity is what makes the blackhole powerful.

From the remains of a collapsed dead star that collapsed in its self, a blackhole is born. once a blackhole is born, some scientists say it can never die. The theory of general relativity predicts that sufficiently compact mass can deform space, time to form a blackhole. After it is formed, it can continue to grow by absorbing mass from its surroundings, by absorbing other stars and merging with other black holes of millions of solar masses[Mo] may form. There's a general consensus that the supermassive blackholes exist [about 10million of them] at the center of most galaxies. They may remain hidden in the black background of the universe.

The monster as described by some scientists is capable of destroying anything that comes near including stars bigger than the sun. it can even bend light. Albert Einstein in 1915, developed his theory of general relativity having earlier shown that gravity does influence light motion. The idea of the blackhole was briefly proposed by astronomical pioneer and English clergyman John Michell in a letter published in November 1784. He correctly noted that such supermassive but non-radiating bodies might be detectable through their gravitational effects on nearby bodies. Objects whose gravitational fields are too strong for light to escape were first considered in the 18th century by John Michell and Pierre –Simon Laplace. The interpretation of a region of space from which nothing can escape was first published by David Finkelstein in 1958. Blackholes are long considered a mathematical curiosity, it was in the 1960s that

theoretical work showed they were a generic prediction of general relativity.

The supermassive blackhole at the core of supergiant elliptical galaxy Messier 87, with a mass ~ 7 billion times the sun's as depicted in the first image released by the Event Horizon Telescope in April 10 2019 revealed the crescent shaped emission ring and central shadow, which are gravitationally magnified views of the black hole's photo ring and the photon capture zone of its event horizon. The crescent shape arises from the blackhole's rotation and the relativistic beaming the shadow is about 2.6 times the diameter of the event horizon. Scientists lament the 'monster' is eating our galaxy-the milky way. This is the story of the power that will soon destroy us all.

The first major scientific discovery made from space was the dangerous Van Allen's radiation belts in 1958 at the university of Iowa. It came at a time when the fight for supremacy on space between the USA and the USSR was brewing high. On April 12 1961 aboard, the space craft Vostok 1, the 27-year-old Soviet Cosmonaut Yuri A. Gagarin becomes the first human to travel into space and also orbit the Earth in 89 minutes. Hitherto, the first artificial satellite had been launched into space by the Soviet Union in 1957. The Russians have also been credited to also be the first to orbit the moon. But soon afterwards, the Americans made their debut. On July 20 1969 at 20:17 UTC, Commander Neil Armstrong, a 38 Year-old NASA Astronaut and Lunar Pilot Module Pilot Buzz Aldrin Landed the Apollo 11 Lunar Pilot Module Eagle on the moon.

In 2012 the California Institute of Technology launched the Curiosity Mars landing. The first crewed Lunar gateway mission is planned for 2023 under NASA's current plans with humans heading to Mars in 2030s. In Nov. 24 2018, the head of Russian's National Space Agency Dmitry Rogozin proposed a mission to the moon to verify whether the American APOLO 11 moon landings really took place during a conversation with president of Moldova, Igor Dodon.

In recent years, more superpowers like China and Australia and emerging ones like Korea have joined in

the battle for supremacy. The battle has gone into the entertainment industry with different Nations playing mind games. Movies like Star treks, Interstellar, the Martian gravity, Europa report, and even Bika mice are part of this mind game.

Some curious minds may ask these questions; How much beneficial is this struggle to mankind owing to billions of dollars' countries are investing in this 'wild goose chase' at the expense of man's basic needs? What is man actually looking for? Is he anticipating catching up with the 'Master of the Universe' owing to his fictitious aliens showcased in movies?

Albert Einstein the famous scientist of our time and other renown scientists have acknowledged that there is yet more to be discovered than has been discovered. He proved this in his equation of relativity the search for knowledge is to infinity. Other food for thoughts here include 'the solar system sits on the outer edges of one arm in a disc of material, and no one can see across the center to the other side.' , this arm [Orion arm] is one partial arm located between Sagittarius and Perseus two of the 4 arms of our galaxy which is also one of millions of galaxies in the universe that is constantly expanding. One important thing to note here is that our galaxy is huge, ranging 100,000-180,000 light years in diameter and 20,000 light years in thickness. So, it is difficult to know what the milky way exactly looks like, after all we sit in the midst of all of it and can't step outside to get a bird's eye view. It's like trying to map your house while being confined to one room. While the spatial size of the entire universe is unknown, it is possible to measure the size of the observable universe which is currently estimated to 93 billion light years. In various multiverse hypotheses, a universe is one of the many causally disconnected constituent parts of a larger multiverse which itself comprises all space and time and its contents.

'AKWAI AIKI'.

PEOPLE AND EVENTS

HOD's Visit to KSMC



Dr. Auwal Abdussalam and Dorothy Abiriyi during the Guest of the Week, talking about Climate Change



Dr. AF Abdussalam, GA Sheyin and staff members of KSMC after the radio programme.

Newest PhDs in the Department



Dr. Aliyu Jaafar, PhD in Geoinformatics from University of Technology, Malaysia



Dr. B.R. Atiyong during the Oral Defense of his PhD at University of Ibadan.

Monthly Staff Breakfast, March - 2019



Prof. J.G Laah and Prof. A.A Adepetu during the Staff Monthly Breakfast



A group picture with the proprietor of Greenfield University after the breakfast

HECRASS Workshop, 2019



A group photograph of some participants at the HECRAS Workshop



A cross section of participants during the HECRAS Workshop at GIS Lab



Tourism: Undergraduate Students in a Tourism Mood at the Department



Student-Centered Learning: Tropical Climatology Presentation by 300L Students at GIS Lab.



A Postgraduate Student during his Internal Defense at a Research Seminar, GIS Lab



A Modern Weather Station Under Construction

Dean's Cup Winners 2019



Dean's Cup: Geography Department Football team in a group picture with the HOD and some members of staff.



Dean's Cup: Geography Department Football team in a group picture with the HOD and some members of staff in the HOD's Office.

Weather Station Under Construction



Mounting of the gate of the weather station under construction



Mr. G.A. Sheyin inspecting the construction of the weather station

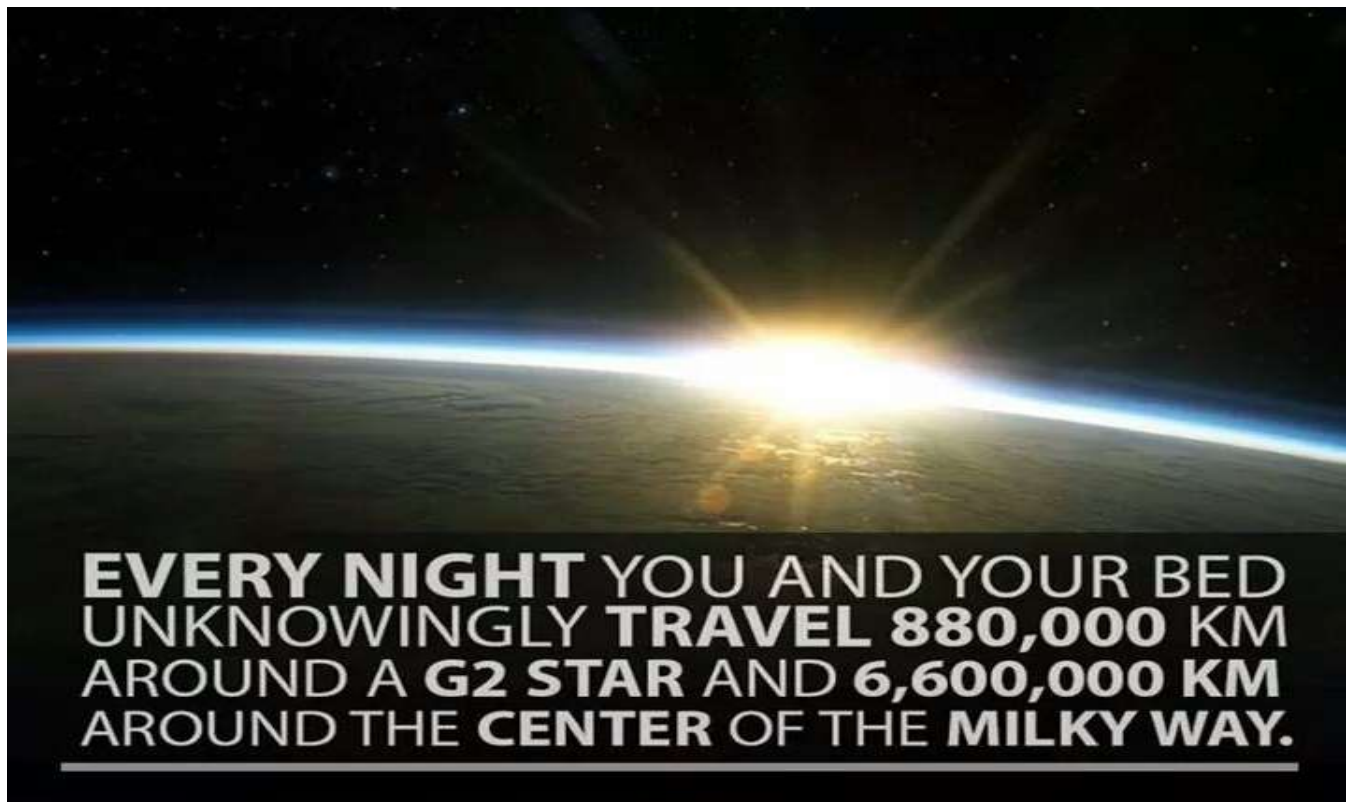
GEOGRAPHICAL JOKE

SAVE?



Contributed by: Dr. AF Abdussalam

Did You Know?





SPECIAL ANNOUNCEMENT

Dear all,

Here we inform you about the activities happening at the department, as well as provide you with up to date information about our staff and students.

- **APPOINTMENT:** Prof. J. G Laah has resumed his appointment as the pioneer Vice Chancellor of Greenfields University, Kaduna. Also, the Atyap Traditional council has conferred him with a chieftaincy title.
- **PhD:** Dr. B. R. Atyong and Dr. Jafar Aliyu A are back from university of Ibadan and Malaysia respectively.
- **TRAINING:** Dr. Sa'adatu Baba is away to the Netherlands for a short training course.
- **OBITUARY:** We regret to announce the death of Mr. Prince Mathew Odira, a final year undergraduate student of the Geography Department. May his soul rest in peace.
- **BREAKFAST:** The first staff monthly breakfast took place on the 4th April 2019. See pictures for more.
- **VERIFICATION:** National Universities Commission Resource Verification for Postgraduate Programmes held on wed 24 April 2019.
- **PRAYERS:** All staff/students are requested to pray for Prof. A.A Adepetu (Baba) who has gone to United States for Medical Treatment for his quick recovery.
- **WINNERS:** The football team representing Geography Department emerged winners of the Dean's Cup on 29th April, 2019.